APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/440,246	11/15/1999	AHMED GHEITH	M-8016-US	2706

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EXAMINER
TODD, GREGORY G

ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 09/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _15 November 1999_ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-44_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-44_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _15 November 1999_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _4_ .

4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: .

DETAILED ACTION

This is a first office action in response to application filed, with the above serial number, on 15 November 1999 in which claims 1-44 are presented for examination. Claims 1-44 are therefore pending in the application.

Drawings

1.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "210" and "200" have both been used to designate the web browser software. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

1.   The abstract of the disclosure is objected to because "quickly, an reused." is informal. Correction is required. See MPEP § 608.01(b).

2.   The disclosure is objected to because of the following informalities: "quickly, an reused." is informal (p. 3, line 23); "saved in a file in the cache and transmitted the file" is improper (p. 4, line 13); "particularly in an architecture were multiple..." is improper. Appropriate correction is required.

Claim Objections

1.   Claim 22 is objected to because of the following informalities: The terminology "is includes" is repetitive. Appropriate correction is required.

2.   Claim 21 is objected to because of the following informalities: The terminology "operable perform" is suggested to be replaced with --operable to perform--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2.   Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "options" is vague and indistinct and could refer to a user optionally selecting a link on a web page, for example.

3.   Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. "The application", line 2, is not clearly referring to which application specifically.

4.   Claim 26 recites the limitation "the client computer system" in line 1. There is insufficient antecedent basis for this limitation in the claim.

5.   Claim 34 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. The terminology "and causing the computing presentation

information" is vague and does not appear to be complete

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act

of 1999 (AIPA) do not apply to the examination of this application as the application

being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily

published under 35 U.S.C. 122(b). Therefore, this application is examined under 35

U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7.   Claims 1-13, 16-31, 33, 36-41, and 43-44 are rejected under 35 U.S.C. 102(e) as

being anticipated by Lambert et al (hereinafter "Lambert", 6,038,601).

8.   As per Claim 1, Lambert discloses a file cache management system for

managing a plurality of files operable to be provided by an application running on a

server computer system to at least one client computer system, wherein at least one of

the plurality of files includes presentation information characterized by a first

presentation state wherein Lambert discloses:

- a subsequent presentation state computation routine operable to cause at least one subsequent presentation state to be computed based on the first presentation state (a child page URL being pre-fetched from an initial parent page) (at least col. 15, lines 34-40);

- a presentation state signature computation routine operable to determine a presentation state signature from at least one of the first presentation state and the at least one subsequent presentation state (hashing a present or future URL) (at least col. 20, lines 43-60).

Lambert discloses pre-fetching child pages from a current page a user requests and looking up the child page URL in a hash table, which would implicitly mean that the pre-fetched, and therefore subsequent, URL's are previously hashed by the server with a capable signature computation routine.

9.   As per Claim 2.

- a server computer system including a processor, and at least one of the subsequent presentation state computation routine and the presentation state signature computation routine is encoded in a computer readable medium as instructions executable on the processor, the computer readable medium being one of a magnetic storage medium, an optical storage medium, and a communications medium conveying signals encoding the instructions (at least Fig. 1B).

10.   As per Claim 3.

- at least a portion of the presentation information is encoded in a markup language (at least col. 15 line 63 - col. 16 line 2).

11. As per Claim 4.

- the markup language is Hypertext Markup Language (HTML) (at least col. 15 line 63 - col. 16 line 2).

12. As per Claim 5

- a presentation information computation routine (algorithm) operable to compute subsequent presentation information (child pages) based upon the at least one subsequent presentation state (at least col. 20, lines 62-67; col. 16, lines 28-39).

13. As per Claim 6

- the file cache management system is operable to receive a second presentation state (child page URL), the file cache management system further comprising a presentation information computation routine (algorithm) operable to compute presentation information based upon the second presentation state (at least col. 20, lines 62-67; col. 16, lines 28-39).

14. As per Claim 7.

- the subsequent presentation state computation routine is operable to cause at least one second subsequent presentation state to be computed based on the second presentation state (child page of the child page, level 2, etc.) (at least col. 16, lines 4-11; col. 20 line 62 - col. 21 line 26).

15. As per Claim 8,

- the presentation state signature computation routine operable to determine a second presentation state signature from the second presentation state (child page URL (second presentation state) is looked ahead on having already been hashed and being in the hash table) (at least col. 20, lines 43-60; col. 16, lines 4-11).

16.   As per Claim 9.

- the plurality of files includes a second presentation file comprising the presentation information based upon the second presentation state (child html page based on child page URL) , and a filename (domain name of hashed URL) based upon the second presentation state signature (at least col. 16, lines 4-11; col. 20, lines 43-60).

17.   As per Claim 10.

- at least one of the plurality of files includes at least one of the at least one subsequent presentation state (child page URL in hash table) and a presentation state signature from the at least one subsequent presentation state (at least col. 16, lines 4-11; col. 20, lines 43-60).

18.   As per Claim 11.

- a file cache operable to store at least one of the plurality of files (at least col. 34, lines 22-29).

19.   As per Claim 12.

- the file cache is a file server computer system (at least col. 34, lines 22-29).

20.   As per Claim 13.

- the presentation state signature computation routine uses a hashing function to

determine the presentation state signature (see above rejection for Claim 1) (at least

col. 20, lines 43-60).

21.   As per Claim 16.

- at least one of the plurality of files further includes a subsequent presentation

state and a subsequent presentation state signature (files have hash value in hash table

with URL) (at least col. 20, lines 43-67; col. 16, lines 28-39).

22.   As per Claim 17.

- at least one of the plurality of files further includes a Universal Resource

Locator (URL) comprising the subsequent presentation state and the subsequent

presentation state signature (associating hash value in hash table with URL) (at least

col. 20, lines 43-67; col. 16, lines 28-39).

23.   As per Claim 18.

- at least one subsequent presentation state is determined by one or more

options selectable by a user (interactive documents) when the user interacts with a

presentation caused when the at least one of the plurality of files is processed by the at

least one client computer system (at least col. 1, lines 13-16; col. 15, lines 64-66).

24.   As per Claim 19.

- at least one subsequent presentation state includes subsequent presentation

state computation routine version information (at least col. 34 line 61 - col. 35 line 12).

25.   As per Claim 20.

- the first presentation state includes version information, the version information describing at least one of the subsequent presentation state computation routine and data used to define the first presentation state (eg. when page was last accessed) (at least col. 34 line 61 - col. 35 line 12).

26.   As per Claim 21.

- a file cache and a look-ahead manager, the look-ahead manager operable to perform causing a presentation information computation routine to compute subsequent presentation information based upon the at least one subsequent presentation state (lookahead algorithm computing mutli-level child pages) (at least col. 20, lines 5-34, 62-67).

27.   As per Claim 22.

- the determining includes searching the file cache for a file having a filename (domain name of hashed URL) including the presentation state signature from the at least one subsequent presentation state (at least col. 16, lines 4-11; col. 20, lines 43-60).

28.   As per Claim 23.

- a web server application operable to receive, from the application, the information provided to the at least one client computer system, wherein the web server is operable to transmit the information provided to the at least one client computer system (at least col. 5, lines 55-60).

29.   As per Claim 24.

- the application is a web server application (at least col. 5, lines 55-60).

30.   As per Claim 25.

- the application includes at least one of the subsequent presentation state

computation routine (lookahead algorithm) and the presentation state signature

computation routine (at least col. 20, lines 5-34, 62-67).

31.   As per Claim 26.

- the client computer system is one of a plurality of interconnected client

computer systems operating in a distributed computing environment and coupled to the

server computer system (at least col. 2, lines 24-34).

32.   As per Claim 27.

- the plurality of interconnected client computer systems and the server computer

system are coupled via a network (at least col. 2, lines 24-34).

33.   As per Claim 28.

- network is the Internet (at least col. 1, lines 13-17).

34.   As per Claim 29, Lambert discloses a method of caching a file including

presentation information characterized by a first state, the file operable to be provided

by an application running on a server computer system to at least one client computer

system, wherein Lambert discloses:

receiving a file request including information based on the first state from the at

least one client computer system;

determining whether the file exists in a cache;

retrieving the file and transmitting the file to the at least one client computer

system when the file exists in the cache (at least col. 5, lines 55-60);

computing presentation information based on the first state when the file does

not exist in the cache (at least col. 6, lines 25-38);

saving the computed presentation information in a file in the cache (local storage)

and transmitting the file to the at least one client computer system (at least col. 12, lines

38-48).

35.   As per Claim 30.

- the file request includes at least one of a filename based on the first state

(domain name of page), and first state information (at least col. 16, lines 4-11; col. 20,

lines 43-60).

36.   As per Claim 31.

- the file request includes a filename computed from first state information using

a hash function (at least col. 20, lines 43-60).

Lambert discloses pre-fetching child pages from a current page a user requests

and looking up the child page URL in a hash table, which would implicitly mean that the

pre-fetched, and therefore subsequent, URL's are previously hashed with a hash

function.

37.   As per Claim 33.

- the file request is a URL (at least col. 20, lines 62-67; col. 16, lines 28-39).

38.   As per Claim 36.

- computing at least one subsequent state based on the first state (at least col.

15, lines 59-66);

computing a signature of the at least one subsequent state based on at least one

subsequent state (hashing a present or future URL) (at least col. 20, lines 43-60); and

including the signature of the at least one subsequent state and the at least one

subsequent state in the presentation information (associating hash value in hash table

with the URL) (at least col. 20, lines 43-67; col. 16, lines 28-39)..

39.   As per Claim 37.

- method encoded in a computer readable medium as instructions executable on

a processor, the computer readable medium being one of a magnetic storage medium,

an optical storage medium, and a communications medium conveying signals encoding

the instructions (at least Fig. 1B).

40.   As per Claim 38, Lambert discloses a file encoded in a computer readable

medium as instructions executable on a processor, wherein the computer readable

medium is one of a magnetic storage medium, an optical storage medium, and a

communications medium conveying signals encoding the instructions wherein Lambert

discloses:

presentation information (web page) characterized by a presentation state (URL)

(at least col. 20, lines 62-67; col. 16, lines 28-39).; and

a filename computed from the presentation state (hashed URL) (at least Fig. 1B;

col. 16, lines 4-11; col. 20, lines 43-60).

41.   As per Claim 39.

- at least a portion of the presentation information is encoded in a markup

language (at least col. 15 line 63 - col. 16 line 2).

42.   As per Claim 40.

- the markup language is one of Hypertext Markup Language (HTML) (at least col. 15 line 63 - col. 16 line 2).

43.   As per Claim 41.

- the filename includes a hash value computed from the presentation state by a hashing function (at least col. 20, lines 43-60).

Lambert discloses pre-fetching child pages from a current page a user requests and looking up the child page URL in a hash table, which would implicitly mean that the pre-fetched, and therefore subsequent, URL's are previously hashed with a hashing function.

44.   As per Claim 43.

- at least one subsequent presentation state and at least one associated subsequent presentation state signature (child page hash value in hash table with child page URL) (at least col. 20, lines 43-67; col. 16, lines 28-39)..

45.   As per Claim 44.

- a Universal Resource Locator (URL) including the at least one subsequent presentation state and the at least one associated subsequent presentation state signature (associating hash value in hash table with URL) (at least col. 20, lines 43-67; col. 16, lines 28-39).

Claim Rejections - 35 USC § 103

46.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

47.   Claims 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Lambert et al (hereinafter "Lambert", 6,038,601) in view of Colby et al (hereinafter

"Colby", 6,006,264).

Lambert discloses a server determining whether a file exists in a cache (at least

col. 5, lines 55-60) and if not it computes the presentation information from another

server. Lambert does not disclose the server determining cache files from a file not

found error such as an HTTP error 404. However, the use and advantages for using

such an error detection is well known to one skilled in the art at the time the invention

was made as evidenced by the teachings of Colby (at least Colby col. 12, lines 6-13).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate the error detection of Colby's server with Lambert's

file-detecting cache server because this would enhance the probability of correctly

determining if the web page is in the server's cache, and using an http 404 error is a

commonly used method of telling a system a page is no longer valid on the internet;

with Lambert's server needing some way of determining if the web-page to pre-fetch is

already on the system, so a common internet method of determining if a file is on a

server is to query the page and if an error is detected in the page retrieval, report it to

the requesting system. Thus, Lambert's server would detect the error and know that the

page is no longer valid and attempt to re-fetch it from another server.

48.   Claims 14-15, 32, and 42 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Lambert et al (hereinafter "Lambert", 6,038,601) in view of Mattis et

al (hereinafter "Mattis", 6,289,358).

Lambert discloses using a hash table to look up a document's URL (presentation

information state and signature) (at least col. 20, lines 43-60). Lambert does not

explicitly disclose using a one-way hash function such as Snefru, N-Hash, MD5, Secure

Hash Algorithm (SHA), RIPE-MD, or HAVAL. However, the use and advantages for

using such a hashing function is well known to one skilled in the art at the time the

invention was made as evidenced by the teachings of Mattis (at least Mattis col. 28,

lines 50-58). Therefore, it would have been obvious to one of ordinary skill in the art at

the time the invention was made to implement Mattis' one-way URL hashing function

(MD5) with Lambert's hashing because this would enhance the expandability and

compatibility of Lambert's system and also utilize the different advantages of using the

one-way hash function, thus allowing multiple documents to be quickly and easily stored

and looked up in the Lambert hash table using the URL-specific hash value.

Conclusion

Chen et al, Jiang et al, Brown et al, Mogul, Becker et al, Kavner, Berstis, Thacker

et al, Parthasarathy et al, and Nelson et al are cited for disclosing pertinent information

related to the claimed invention. Applicants are requested to consider the prior art reference for relevant teachings when responding to this office action.
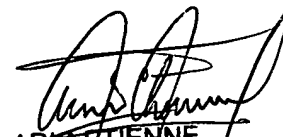
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory G Todd whose telephone number is (703)305-5343. The examiner can normally be reached on Monday - Friday 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (703)305-4792. The fax phone numbers for the organization where this application or proceeding is assigned are (703)746-9153 for regular communications and (703)305-7201 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

gt
September 9, 2002

ARIO ETIENNE
PRIMARY EXAMINER